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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ROST, ANDREW J

ART UNIT	PAPER NUMBER
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3751

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,439

Applicant(s)

MORRISON, WILLIAM

Examiner

Andrew J. Rost

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/24 9/21 8/16</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Art Unit: 3751

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 8-9, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hajny et al. (5,295,562).

Regarding claims 1, 2, 9 and 14, Hajny et al. discloses an actuator (10) with a gear assembly (power transmission 16), a motor (14), biasing means (spring assembly 31, not shown), and brake means (centrifugal brake 12) mounted on the drive shaft of the motor and will slow the attainable velocity of the actuator when the biasing member is in operation (Column 4, lines 50-60).

In regards to claims 3 and 8, Hajny et al. discloses a brake means of a centrifugal brake that uses friction and only interacts with brake plate (37) at sufficient rotational speeds (Column 4-5, lines 67-2).

In regards to claim 15, Hajny et al. discloses a motor having a motor housing (sidewall and top, brake plate 37 in Figure 1).

In regards to claim 16, Hajny et al. discloses a centrifugal brake has flex members (48) that as the rotational speed is increased to a sufficient speed will cause flex members to bend toward the friction surface of the motor housing (Figure 4) causing the centrifugal brake to frictionally engage the motor housing (Column 5, lines 54-67).

In regards to claim 17, Hajny et al. discloses the centrifugal brake mounted on the drive shaft of the motor and radially secured and centered on the shaft (Figure 2).

3. Claims 1, 2 and 4 rejected under 35 U.S.C. 102(b) as being anticipated by Weiss et al. (6,097,123).

Regarding claims 1 and 2, Weiss et al. discloses an actuator (10) with a motor (22), biasing means (coiled spring 20) and brake means through a control apparatus (34).

In regards to claim 4, Weiss et al. discloses the apparatus comprises a stationary ring of conductive material with a magnet and as the magnet moves eddy currents are produced in the stationary ring resulting in impedance to the movement of the transmission (Column 2, lines 19-27).

4. Claims 1, 2, 6, 7, 9, 12-14, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Pasch et al. (6,021,955).

Regarding claims 1, 2, 9 and 14, Pasch et al. discloses a valve damper assembly (10) with a gear assembly (gear train 76), a motor (78), biasing means (torsion spring 64), and brake means.

In regards to claims 6 and 7, Pasch et al. discloses the brake means of periodically energizing and pulsing the motor for regulating the speed of the damper as the damper moves from a closed position to an open position (Column 10, line 62-67).

In regards to claims 12 and 13, Pasch et al. discloses that energizing the motor moves the valve in a first direction and closes the damper and that the biasing spring moves the valve in a second direction and opens the valve (Column 8, lines 16-18, 30-32)

Regarding claim 21, Pasch et al. discloses a valve having two positions, closed being the first and opened being the second, an actuator assembly proximate the valve (Figure 3) and damping means that are engaged when opening the damper but not when closing the damper (Column 10, lines 62-67).

5. Claims 1-3, 8-11, 14, 15, 17, 21-25 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Persons (2,052,987).

Regarding claims 1, 2, 9, 14 and 15, Persons discloses an actuator with a gear assembly (26), a motor (36) with the housing being defined by frame (18), biasing means (spring 39), and brake means (friction brake in drum 41) mounted on the drive shaft of the motor and will retard the speed of the device (Column 2-3, lines 50-7).

In regards to claims 3, Persons discloses brake means that uses the interaction between friction blocks (44) and drum (41) (Column 2-3, lines 50-7).

In regards to claims 10 and 11, Persons discloses the action of the motor opens the valve and the biasing means closes the valve (Column 1, lines 3-7).

In regards to claim 17, Persons discloses the motor comprises a radially centered shaft (34) with brake means secured.

Regarding claims 21-25, Persons discloses a valve having a first position (opened) and second position (closed), an actuator assembly proximate the valve and damping means (friction blocks in drum 41) that limit the speed of the valve when moving from the opened position to the closed position (Column 2-3, lines 50-7). The valve (1) contains a fluid passageway that can be configured to handle water systems.

Regarding claim 27, Persons discloses a valve assembly with a valve (1) with a valve stem (7), a gear assembly, a motor, a spring and damping means (friction brake in drum 41).

In regards to claims 8 and 28, Persons discloses the interaction between the friction blocks and the drum when a predetermined speed has been reached (Column 3, lines 3-7).

Regarding claims 29 and 30, Persons discloses the operation of a valve by using a first force, supplied by the motor, to open the valve and then using a second force, supplied by the spring bias, to close the valve with the interaction of the friction blocks on the drum to slow the closing speed (Column 3, lines 3-7).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hajny et al. in view of Bellinger (6,349,253).

Hajny et al. discloses a motor, biasing means and brake means. Hajny et al. does not disclose the use of a transmission that changes gearing ratios depending on the direction of movement. However, Bellinger discloses braking means of automatically selectable gearing ratios of the transmission to control speed of a vehicle and engine. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to replace the brake means of Hajny et al. with the automatically selectable gearing ratios of a transmission of Bellinger in order to control the valve return speed.

8. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hajny et al. in view of Persons.

Hajny et al. discloses an actuator assembly with a motor, biasing means, and brake means that engage the motor housing. Hajny et al. does not disclose brake means comprising a straight portion and thickened curved portions. However, Persons discloses a brake means of a straight portion with two curved portions with thickened portions of weights and friction blocks that interact with a drum. Therefore, it would have been obvious to one of ordinary skill in the art to replace the brake means of Hajny et al. with the drum with friction brake of Persons in order to allow for alterations of the braking force by changing the positions and sizes of the weights on the ends of the curved portions of the friction brake.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Persons in view of Pasch et al.

Persons discloses a valve assembly configured to move between a first and second position. Persons does not disclose the valve moving in response to a thermostat. However, Pasch et al. discloses the use of a thermostat for operating a motor in a damper system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to control the valve of Persons with the thermostat of Pasch et al. in order to regulate the flow of water through a pipe in response to temperature.

10. Claims 31 and 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Persons.

Persons discloses a valve assembly with a motor, biasing means and brake means. Persons does not disclose a method for replacing a previously installed valve assembly. However, replacing a previously installed valve assembly with a newer version is the job function of a mechanic that replaces broken parts. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to replace the current valve assemblies with newer versions that contain brake means in order to alleviate valve problems.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Groble discloses an electrically controlled pressure-regulating system. Forrester discloses an automatic valve that interrupts fluid flow by means the fluid pressure. Balz discloses a shut-off device that is operated by deflection of leaf legs. Lissmyr et al. discloses a valve that uses hydraulic damping means. Barall discloses a pneumatic driven metering pump for liquids. Kunogi discloses a solenoid-operated valve that includes differing biasing elements. Tsuchiya et al. discloses an apparatus for opening and closing containers. Wilkins discloses an annulus valve that includes a valve ball positioned in the passageway. Beeson discloses an adjustable close-off force for seating a valve. Scholl et al. discloses an apparatus that actuates a valve stem after receiving signals from an electronic source. Erhardt et al. discloses a method for eliminating water hammer by shutting down the source as a single valve is closed. Schreiner discloses a modulating valve that plugs the passageway as it limits the amount of fluid flow. Genga discloses a circulator controller for a hydronic heating and cooling system that uses torque to overcome friction. Lebkuchner discloses a valve that uses a motor to open and close the valve and has a spring to bias the valve stem open. Makihara et al. discloses a flow control device that helps to eliminate valve colliding noise, water hammer noise and temperature variation in a water heating system. Castle discloses a valve that uses a motor to open and close the valve and has a spring to bias the valve stem open. Specht et al. discloses a solenoid that closes the valve after receiving a signal from a series of thermistors, which slows the return of the solenoid valve. Schreiner, Jr., et al. discloses a removable and interchangeable valve

actuator system. Lebkuchner et al. discloses a valve that uses a motor to open and close the valve and has a spring to bias the valve stem open. Moore et al. discloses a HVAC control system that utilizes sensors and fans. McIntosh discloses a globe valve with a motor that opens the valve and a spring that closes the valve. Hudson et al. discloses an apparatus for positioning a member in a flow and contains a winding biasing member. Gross discloses a braking element that pulses winding elements. Parsons discloses an actuator that uses a motor to turn a shaft in one direction and a spring to rotate the shaft a different direction. Birchmeier discloses an actuating drive with a spring return feature. Kogyo discloses a motor operated valve with a friction brake. Hironobu discloses valve with a speed reduction gear and a magnetic braking.

The Bucher Johannes reference was not considered because it could not be found.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:30-5 M-Th and 7:30-5 every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew J Rost
Examiner
Art Unit 3751



JUSTINE R. YU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

9/1/05